

November 9, 2016

Mr. Matthew Turner  
Bureau of Inspection and Review  
Site Remediation Program  
New Jersey Department of Environmental Protection  
401-05H  
PO Box 420  
Trenton, New Jersey 08625-0420

RE: Response to NJDEP Ecological Component Review Comments  
Hatco Corporation, PI No. G000003943  
Comment Receipt Date: August 30, 2016

Dear Mr. Turner,

Licensed Site Remediation Professional (LSRP) Mark Fisher and Weston received comments on the ecological components of the Remedial Investigation Report (RIR) for the Hatco site, dated May 7, 2016. New Jersey Department of Environmental Protection's (NJDEP) comments were presented in an undated memorandum from Nancy Hamill to Matthew Turner and Gerald Hahn of the Bureau of Inspection and Review. Weston and the LSRP of Record for the Site respectfully provide this letter responding to each comment. Each of NJDEP's comments is reproduced below followed by the associated response.

**Comment 1:** (p. 2-1) 2.1 Ownership and Operational History and (p. 2-66) 2.3.33.1 *Summary of Hatco Industrial Discharge History Related to AOC 25* - Collectively, these sections describe that liquid waste/effluent from AOC 2, Former Ponds, was "released from the ponds and flowed through marsh land and into the Raritan River" between 1954 and 1966, and that "the discharge went directly to Crows Mill Creek during this period." Therefore, the Raritan River should have been identified as a potentially impacted ESNR, with the RI objective of determining whether Site-related contaminants migrated to and persist in Raritan River sediment. Data collection in the lower 1000' section of Crows Mill Creek, at the confluence of Crows Mill Creek with the Raritan River, and proximal locations in the Raritan River is required. Also see comment 5 (d). The LSRP should verify whether the "marsh land" referred to coincides with Channel D wetlands that have been characterized or whether additional wetland characterization is needed.

**Response 1:** NJDEP's comment includes three statements that require responses. For clarity, this response has been separated into three parts, addressing each of the statements.

**Response 1A:** NJDEP comments that “...the Raritan River should have been identified as a potentially impacted ESNR, with the RI objective of determining whether site-related contaminants migrated to and persist in Raritan River sediment.”

As discussed in the RIR, the Raritan River was identified as a potential receptor. Sediment sampling demonstrated delineation of PCBs at location CDG 373, which is more than 2,000 feet upstream of the river (see RIR Figure 7.1.15-2), indicating no site-related PCB impacts to this potential receptor. The next upstream sample location, CDG 368 located roughly 350 feet further upstream, exhibited polychlorinated biphenyls (PCBs) in sediment concentration of 1.1 milligrams per kilogram (mg/kg), which is only slightly above the site-specific PCB in sediment remediation goal of 1 mg/kg. Similar or lower PCB concentrations were reported in the sediment samples collected from the vicinity of the Crows Mill Creek channel further upstream on Block 62, Lot 2 (see RIR Figure 2.3.33-5). Sediment samples collected from five locations along the 800-foot reach of Crows Mill Creek downstream of location CDG 373 exhibited no exceedances of PCBs in sediments. Accordingly, these data demonstrate complete downstream delineation of PCBs in the Crows Mill Creek sediments.

The RIR data show that bis(2-ethylhexyl) phthalate (BEHP) has migrated further downstream than the PCBs. However, the RIR data indicate that BEHP has been delineated to the proposed alternative sediment screening criterion of 22 mg/kg at location CDG 383, roughly 1,200 feet upstream of the river (see RIR Figure 7.1.15-3). The BEHP concentrations were also below the current screening level of 0.75 mg/kg in the shallow sediment sample from this location and the three nearest locations in the reach extending approximately 500 feet upstream. The deeper sample from location CDG 383 (2.5 to 3.0 feet below grade) was 1.6 mg/kg, which is close to 0.75 mg/kg and well below the proposed alternative screening level of 22 mg/kg as discussed below in our response to Comment 3.

A BEHP in sediment exceedance was detected in the nearest upstream sample location, CDG 382, located roughly 250 feet west of the downstream delineation point at CDG 383. The exceedance, 380 mg/kg, was detected in the sample collected from 2.5 to 3.0 feet below grade. This concentration is higher than the BEHP concentrations reported in surrounding samples at similar depths and likely represents an isolated hotspot. Subject to approval by the property owner, additional samples can be collected to refine the delineation of this exceedance. However, given the existing extensive data set, it is not appropriate to collect samples in the entire 1,000-foot reach of Crows Mill Creek, downstream of the delineation point or in the Raritan River, because the existing data already confirm delineation significantly upstream of the river.

Additionally, it is important to note that a tide gate is located in Crows Mill Creek, roughly 300 feet downstream from this location, which separates the lower 700 feet of the creek from the rest of the channel. The tidal effect downstream of the tide gate allows flow in both directions along the lower 700 feet of the creek, to and from the river. There are numerous known contaminated sites along the Raritan River upstream from this area. Sediments in this lower reach would be expected to reflect conditions from multiple sources not related to Hatco. As discussed above and presented in the RIR, the existing data indicate that sediment contamination has been delineated

more than 1,000 feet upstream of the river. Without evidence to indicate downstream impacts from Hatco, it is not appropriate to extend the sampling beyond this limit. The detail below, from RIR figure 7.1.15-3 has been annotated to show the location of the tide gate.



**Response 1B:** NJDEP comments that “Data collection in the lower 1000’ section of Crows Mill Creek, at the confluence of Crows Mill Creek with the Raritan River, and proximal locations in the Raritan River is required.” As noted above, sediment sampling in Crows Mill Creek demonstrated delineation of potential site-related contaminants upstream of the tide gate and therefore, no further investigation is warranted regarding this issue.

**Response 1C:** NJDEP comments that, “The LSRP should verify whether the “marsh land” referred to coincides with Channel D wetlands that have been characterized or whether additional wetland characterization is needed.” The term “Channel D” applies specifically to the channel defined in the Surface Water Modeling Report prepared by Woodward-Clyde and dated October 1, 1998. Channel D begins at the culvert beneath Riverside Drive (formerly Industrial Avenue) and extends 300 feet southward. The terms lowland or marshland presented in the report apply to the entire low lying area that extends from Riverside Drive southward to the tide gate at Crows Mill Road. The entire lowland area has been fully characterized as part of the investigation of the Site, therefore, no additional delineation is required.

**Comment 2:** (p. 2-48) 2.3.29 and (p. 7-11) 7.1.11 **AOC 21B: Sling Tail Creek** – The remedial investigation of Sling Tail Creek is not complete. The LSRP relied upon approximately 25 year-old data augmented by resampling at only one location in 2016 for PCB analysis only; these data



are inadequate to characterize the current conditions of Sling Tail Creek sediment and surface water. According to the historic data presented on Table 2.3.29-1, of the 12 locations sampled in Sling Tail Creek in 1988 and 1992, all were analyzed for PCBs, only four were analyzed for PAHs, only 6 were analyzed for phthalates, and only one was analyzed for VOAs. The existing chemical data are not adequate to characterize the historic discharge and potential residuals from AOC 6, *Phthalic Anhydride Process Area* (described as discharging up to 200,000 GPD directly to Sling Tail Creek, p. 2-16), AOC 14, *Naphthalene Area* (p. 2-34), or AOC 7A, *Phthalic Anhydride Residue Area/Northeast Impoundment* (p. 2-17). The RIR should be revised to identify data gaps for Sling Tail Creek with a description of how they will be addressed.

**Response to Comment 2:** The RIR relies on data originally collected in 1988 and 1992. Contamination in the vicinity of Slingtail Creek area was associated with the former phthalic anhydride plant process area (AOC 6) and residue area (AOC 7A). The phthalic anhydride plant began operating in 1961 and was shut down in 1971. The area was remediated by Dan Raviv Associates, Inc. (DRAI) in 1988 and 1989. Following that work, the remediated former phthalic anhydride residue area was left as a depression with no direct pathway to Slingtail Creek. Because the exposed contamination was removed by DRAI there was no further potential for impacts to Slingtail Creek by overland flow. No evidence of discharges to the stream channel from the Hatco site were reported after the remediation by DRAI in 1988 and 1989. Current potential sources of impact to Slingtail Creek sediments are storm water runoff from present-day plant operations, Route 440 and commercial / residential areas in the Keasbey section of Woodbridge Township to the north. As explained in Section 1.2 of the RIR, Weston assumed responsibility for contamination associated with historical releases from the Hatco site prior to November 4, 2002. The sampling data presented in the report document the conditions that existed in the Slingtail Creek channel during the period for which Weston is responsible. The resampling in 2016 was conducted specifically to address the exceedances that were documented through previous sampling but not fully delineated. Weston acknowledges that further sampling of the streambed could identify contamination associated with recent urban runoff. However, additional investigation of recent contamination is outside of the regulatory obligation of Weston pursuant to the prior ACO for the Site and Remediation Agreement, dated April 8, 2005, between Hatco, Debtors, NJDEP, Weston and ACE.

**Comment 3:** (p. 2-53) 2.3.31-2 *AOC 23: Channels B and C /Sediment Sampling* - This section refers to a “site-specific sediment value of 22 mg/kg (Section 5.3) for BEHP” (See comment 7: Section 5.3 is missing from the RIR). The LSRP is advised that the use of 22 mg/kg is that of an alternate screening criterion for BEHP, not as a site-specific criterion, as discussed between the LSRP and the Department during a March 6, 2015 Technical Consultation for Woodbridge Pond (see minutes, Appendix 92). Alternate screening criteria are allowed to be proposed in accordance with the EETG and the preamble to the NJDEP Ecological Screening Criteria (ESC) Table. It is not “site-specific” in that no Site data were used to develop this value. For use at any AOC other than Woodbridge Pond, justification should be provided by the LSRP. For example, the value of 22 mg/kg is based on the protection of the freshwater sediment benthic macroinvertebrate community, therefore in areas without permanent inundation, it would not apply.

**Response to Comment 3:** The intent of the language in the RIR was not to apply the 22 mg/kg concentration for BEHP as a site-specific remediation goal. It was intended as an alternative screening criterion. We apologize for any confusion resulting from the terminology. The stream channels in the southern portion of the lowland area are perennial. As discussed during the technical consultation meeting on March 6, 2015, it was our understanding that NJDEP agreed with the position that the current Ecological Screening Level of 0.75 mg/kg was based on a flawed study from Washington State and that it would be appropriate to adopt Washington State's current screening level of 22 mg/kg as a reasonable alternative for purposes of delineation. Weston will amend the RIR to clearly identify 22 mg/kg as an alternative screening level and replace any wording that suggests 22 mg/kg is a remediation goal to be applied anywhere except Woodbridge Pond.

**Comment 4:** (p. 2-61) 2.3.32 and (p. 7-14) 7.1.13.4 **AOC 24: Woodbridge Pond / PCB and BHP in Sediment Delineation** – Delineation for PCBs and BEHP in the northeast portion of Woodbridge Pond is not complete, for example, north of locations CP-12, -15, -20, -31, and -36. The RIR states that the extent of the boundary for the pond, thus the extent for contaminant delineation, is based on aerial photography. This is not justification to cease delineation; additional horizontal and vertical delineation is required to the full extent of contamination, pursuant to N.J.A.C.7:26E-4.1 and 4.8. Section 7.1.13.4 begins with a reference to Section 5.3 and Table 4.3-1, both of which are missing from the RIR and are not listed in the Table of Contents. This important information should be provided. Also see comment 7.

The RIR (p.2-52) describes Woodbridge Pond as feeding into Middle Pond and West Pond, which in turn discharge to the Raritan River. Figures depicting the connection from Woodbridge Pond to Mill and West Ponds, and the connection with the Raritan River, should be provided and the LSRP should explain whether data were collected from the two ponds. Also, please explain if the sampling in the Riverside Drive Drainage Ditch described on p. 2-14 was based on contaminant migration potential from the southwest outfall channel in Woodbridge Pond.

**Response 4:** NJDEP's comment includes four statements that require responses. For clarity, the responses are provided in four parts, addressing each of the statements.

**Response to Comment 4A: PCB and BEHP delineation in Woodbridge Pond Sediment.** The contamination under investigation in Woodbridge Pond relates to historical overland flow from the Hatco site into Channel C, and via Channel C into the pond. Contaminant migration in the pond appears to have followed sediment movement caused by run off entering the pond from Channel C. Distributions and relative concentrations of PCBs and BEHP observed in the pond sediments show concentrations generally declining with distance away from where Channel C discharges into the pond. Soil contamination has been delineated in the area of Channel C, well to the east of the pond sediment sample locations noted in NJDEP's comment. No evidence has ever been identified of surface discharges related to the Hatco site or sediment migration to the soil beyond the northern limit of the pond west of Channel C. Also, there is no evidence of a migration or process for sediment to move out of the pond to impact soil to the north. Therefore, it was concluded that the limit of sediment contamination associated with Woodbridge Pond could not possibly extend beyond the limit of the actual sediments in the pond. The limit of the pond was

therefore used to establish the horizontal limit of pond sediment contamination and serves as an appropriate line of evidence in support of this position. Apart from the soil contaminated by historical overland flow from Hatco to Channel C, no soil contamination is suggested by the migration processes or existing data. Surface soil contamination was previously delineated and remediated at Channel C, east of the sediment sample locations noted in NJDEP's comment (See RIR discussion of AOC 23).

**Response to Comment 4B:** *Section References.* The reference to Section 5.3 will be corrected to reference Section 4.3 and Table 4.3-1. This was a production error. A copy of Table 4.3-1 is provided in **Attachment 1**.

**Response to Comment 4C:** *Woodbridge Pond and possible connection to Mill Pond, West Pond, the Riverside Drive Drainage Ditch and the Raritan River.* An excerpt from a May 22, 1968 letter from Tenneco references Brinkman's Pond (currently known as Woodbridge Pond) feeding into Middle Pond (on EPEC's parcel, south of Riverside Drive). According to this letter, Middle Pond discharged to West Pond. However this discharge was identified as a temporary condition that resulted from earth movement in 1967 and was corrected on August 2, 1968. Middle Pond, West Pond and discharges from West Pond to the Raritan was addressed by EPEC during their remediation project (e.g., Remedial Action Workplan, Brown & Caldwell, December 13, 2010); ponds on the EPEC parcel were used as part of their industrial operations. No figures or other historical documentation of Brinkman's Pond (aka Woodbridge Pond) overflowing into Middle Pond were identified in the historical project files. However, based on the description and the location of Woodbridge Pond relative to the other two ponds, even under a worst-case assumption, this temporary condition at that time would have involved a connection from the southwest corner of Woodbridge Pond to Middle Pond. Sediment delineation in Woodbridge Pond demonstrates that PCBs and BEHP are limited to the eastern side of Woodbridge Pond and the channels east of the pond. Even if the temporary condition suggested in the May 22, 1968 letter resulted in drainage from Woodbridge Pond to Middle Pond, that condition was short duration as indicated by the letter (i.e., approximately one year). A letter from Hatco dated August 21, 1968, confirms that the temporary condition was corrected. More importantly, during the referenced time period (1967 to August 2, 1968) Hatco was connected to the Middlesex County Utility Authority (MCUA) sewer system. Water discharged to Woodbridge Pond, therefore, was not industrial wastewater; it was apparently seepage from a natural spring, which was identified in correspondence from August 21, 1968, included as **Attachment 2**. Based on the above information, no further evaluation of this issue is required.

**Response to Comment 4D:** *Reason for sampling in the Riverside Drive Drainage Ditch described on page 2-14.* The reference to the Riverside Drive Drainage Ditch sampling is on page 7-14. Samples were collected in this area in 2011 as proposed in the August 2009 Consolidated Remedial Action Workplan (RAWP), Addendum No. 3, that was approved by NJDEP on February 18, 2010. The samples were collected in response to a NJDEP request for additional sampling as expressed during a July 24, 2009 site visit by NJDEP and Weston. Samples were proposed in the December 2010 Sampling and Analysis Plan, which described their purpose as "Weston will perform both vertical and horizontal delineation sampling for the low-level PCBs detected by EPEC in a drainage ditch upgradient of the EPEC site, to evaluate potential for Hatco contamination to EPEC

site water bodies.” The Sampling Plan further noted that Weston’s samples would delineate EPEC HD-1 and HD-2.

**Comment 5a:** Figures 2.3.33-3, 2.3.33-6, and 7.1.15-3 collectively indicate that extraordinarily elevated, percent-level BEHP concentrations (at many locations over 10,000 mg/kg, up to 58,000 mg/kg) are present in surface and subsurface intervals, primarily throughout the entire Central portion of AOC 25, the southern part of the Northern portion, and in a large area of the Southern portion. The presence of such widespread elevated levels is the most salient finding of the Channel D area investigation, yet is not clearly brought forth in the text. The RIR (p.2-73) generally states “the highest concentrations for both PCBs and BEHP occur in that region of the GreDel property where AOC 25b, a channel from Hartman’s Pond, and Crows Mill Creek, plus GreDel fill material all appear to coalesce,” however, no mention of the actual concentrations and widespread nature of the impact was made. These broad statements and lack of quantitative discussion gives the impression that high concentration areas are localized, when in fact areas with highly elevated concentrations are widespread. Text (p. 7-19, 4<sup>th</sup> bullet) is also misleading, stating that “a decreasing trend in BEHP concentrations from west to east has been established.” The RIR should be revised to include a specific discussion of the widespread, highly elevated BEHP levels in this area. The exceedences of NJ Surface Water Quality Standards (SWQS) and surface water ESC in five (5) 2014 surface water samples is an additional line of evidence for adverse impacts from contaminated sediments (Table 2.3.33-1).

**Response to Comment 5a:** Weston takes exception to NJDEP’s characterization of Weston’s presentation as “misleading.” The RIR presents the data clearly and succinctly and refrains from the use of subjective terminology such as “extraordinarily elevated” and “widespread nature of impact.” The report clearly states where the highest concentrations were found and the quantitative data are presented clearly on tables and figures. The intent of an RI report is to present the factual data and to discuss whether or not the exceedances have been delineated. With regard to the decreasing trend in BEHP concentrations from west to east, this conclusion to be self-evident based on the data presented and the isoconcentration maps provided as Figures 2.3.33-3 and 2.3.33-4. Weston will amend that discussion in the RIR for clarity.

**Comment 5b:** In light of the high and widespread PCB and BEHP levels in the Channel D area, ETRA recommends supplemental sampling in the large uncharacterized area in the Northern portion of Channel D, roughly bounded by Riverside Drive to the north, sample locations CD-09-20E and CD-21 to the west, and CDG-21, -34, and -45 to the east. Such data will reduce uncertainty and verify whether or not any residual contaminants are at protective levels. The RIR should identify lack of data from this area as a data gap.

**Response to Comment 5b:** The area in question is not a data gap. Weston did not sample this area during the investigation because EPEC previously sampled this area. Results of EPEC’s work were presented in their Supplemental RIR dated March 2010. An electronic copy of volume 1 of EPEC’s supplemental RIR is included as **Attachment 3** for reference. The samples collected by Weston as presented on Figure 2.3.33-2 provide delineation of the area in question.

In December 2010, Weston submitted a Revised Channel D Sampling and Analysis Plan to NJDEP. This Sampling and Analysis Plan incorporated the results of a meeting at NJDEP on October 19, 2010; that meeting included EPEC representatives, NJDEP and Weston. The sampling locations presented in this plan built upon sampling completed by EPEC. A copy of Figure 1 from the Revised Channel D Sampling and Analysis Plan is included as **Attachment 4** and it shows the location of prior samples collected by both EPEC and Weston as well as the samples proposed in the December 2010 sampling plan.

**Comment 5c:** ETRA disagrees with the LSRP's decision (described on p. 7-18) to limit PCB analyses to only the surface (0- 0.5') interval in the 2014 sampling of the GreDel and Woodbridge Township portions of the southern Channel D area (Block 77, Lots 100 and 100.01). In light of the many decades of discharge and potential for accretion of cleaner sediment, and in accordance with the EETG, the subsurface interval should be included for PCB analyses. This decision is also puzzling because deeper samples were collected and analyzed for BEHP. The RIR should identify lack of subsurface PCB data as a data gap.

**Response to Comment 5c:** The lack of subsurface PCB data on Block 77, Lots 100 and 100.01 is not a data gap. One goal of the sampling program performed in 2014 was to provide horizontal delineation of PCB exceedances previously reported at the southern limit of Block 62, Lot 2. Previous PCB results for sample locations in the southern portion of this parcel with multiple depth intervals consistently identified the highest PCB concentrations at the surface with lower concentrations or non-detectable results at depth. The analytical results for samples from Block 62, Lot 2 do not suggest accretion of cleaner sediments above the contaminated sediments. The samples along the southern boundary of Block 62, Lot 2 exhibited exceedances only in the surface samples. The decision to analyze PCBs only in the surface intervals for samples from Block 77 Lots 100 and 100.01 PCBs is appropriate because PCB contamination below the surface has been delineated at the southern boundary of Block 62, which is located upgradient of Block 77, Lots 100 and 100.01.

Furthermore, the PCB results for all but three of the surface samples collected on Block 77, Lot 100 and all of the samples collected on Block 77, Lot 100.01 were below the remediation goals. Two of the three exceedances (1.2 mg/kg and 4.1 mg/kg) were detected in the two sediment sample locations nearest Block 62, Lot 2. The third PCB exceedance (1.1 mg/kg) was reported in a sediment sample from a low lying area roughly 650 feet south of Block 62, Lot 2. The PCB concentrations at all three locations are similar to the PCB concentrations reported in surface samples along the southern boundary of Block 62 Lot 2, which showed no exceedances at depth. Given similar sediment transport and deposition processes there is no reason to assume that vertical PCB distribution would be different on Block 77 Lot 100 than the vertical distribution documented at the southern limit of Block 62 Lot 2.

The downgradient limit of BEHP on Block 62, Lot 2 was not delineated at depth. Therefore, the deeper samples on Block 77 were analyzed for BEHP.



**Comment 5d:** The RIR (p. 7-18) states that four (4) samples are “located in the current stream channel just north of the discharge to the Raritan River.” This statement is misleading in there is a distance of approximately 1000 feet between the downgradient-most sample, CDG 383, and the confluence of Crows Mill Creek with the Raritan River. In consideration of the many decades of discharge and the highly elevated upgradient concentrations of PCBs and BEHP, sampling and analyses for both contaminants from this uncharacterized portion of the creek, at the confluence with the Raritan River, and in proximal areas of the Raritan River, are critical to reduce uncertainty and verify that any residual contaminants are at protective levels.

**Response to Comment 5d:** Please refer to the response to Comment 1A regarding further sampling of the stream channel/confluence of Mill Creek with the river.

**Comment 5e:** The RIR (p. 2-67) states that in the 1940s, a channel was cut on the western side of the EPEC property that carried drainage south to the Raritan River. Is this feature impacted by Hatco discharge? Is it one and the same with Crows Mill Creek? Please explain.

**Response to Comment 5e:** This channel is on the western border of EPEC and is not Crows Mill Creek. There is no tie to Hatco for this channel and its existence pre-dated Hatco operations. It was mentioned only because it is a manmade alteration to the historical drainage features in the area. There is no evidence that this channel was impacted by historical discharges from Hatco.

**Comment 5f:** Section 2.3.33.2 describes potential releases to AOC 25 and text (p. 2-68) refers the reader to “Figure 57” to observe these pathways. There is no such figure in the report or listed in the Table of Contents. Please explain or provide it.

**Response to Comment 5f:** This reference will be corrected to Figure 2.3.33-1, which was included in the RIR.

**Comment 5g:** Text (p. 2-72) transposed figure references for PCBs and BEHP. The reference incorrectly states that Figures 2.3.33-3 and 2.3.33-4 present PCB results for the Northern and Central portion of AOC 25; in fact, these figures present BEHP data. Text should be corrected.

**Response to Comment 5g:** The text will be corrected.

**Comment 5h:** In Figures 2.3.33-3 and 2.3.33-6, which present BEHP results for the Northern and Central portions of AOC 25, respectively, the footnotes indicate BEHP soil data are compared with a benchmark of 210 mg/kg, and the legend indicates a red dot is used for soil data exceeding 49 mg/kg. Both values are former human health-based residential and non-residential soil cleanup criteria, and are not paramount in an ecological exposure area such as AOC 25. For sediment, 22 mg/kg is being used as an alternate screening criterion for BEHP at this time (however see comment 3); for wetland or upland soil in an ecological exposure area, the ecologically-based soil screening criterion of 0.93 mg/kg should be used (see the Table of Ecological Screening Criteria, available at <http://www.nj.gov/dep/srp/guidance/ecoscreening/>). If human exposure is likely, the

Soil Remediation Standards should also be considered (see N.J.A.C.7:26E-3.6 (c)4) and the lower of the ecological criterion or current Soil Remediation Standards should be used.

**Response to Comment 5h:** Standards applied were based on the media being evaluated. The December 2010 Sampling and Analysis Plan submitted to and approved by NJDEP specifically defined sediment at this site as “any material falling within the bed (but not bank) of stream channels, saturated ditches or ponds at the Hatco facility or offsite, including Channels A, B, C and D and the offsite pond. Any samples collected from areas falling outside of delineated wetland boundaries will be considered soil.” The BEHP figures have been revised to apply 22 mg/kg to inundated sediment and 0.93 to soils as screening levels (**Attachment 6**). These revisions do not alter the interpretation of the nature, extent and delineation of contamination in this area.

**Comments 5i and 5j:** In Figures 2.3.33-2 and 2.3.33-5, which present PCB results in Northern and Central portions of AOC 25, respectively, footnotes indicate red color-coding for soil exceeding 25 mg/kg and sediment exceeding 10 mg/kg. What is the significance of these levels?

For all figures, the LSRP should verify that color coding and concentrations are correct. For example, on Figure 2.3.33-6, should the dots for samples CDGF34 and -48 should be red, not green, since benchmarks are exceeded (however, ecological benchmarks should be used)? Also on this figure, BEHP results for location CDG 244 are reported as 38,000 mg/kg vs 5900 mg/kg on the draft oversize Figure 2 of 2 for Channel D BEHP results, 5/8/2012. Please explain.

**Response to Comment 5i and j:** The color coding was included in error. This was a relic from screening performed earlier in the project. Revised PCB figures are included in **Attachment 5**. In some cases, two values were provided for the same interval in the RIR figures. Those values were either split sample results that were submitted to two separate laboratories or delineation samples collected on separate dates. In either case both results are provided for reference. The two results for the sample referenced in NJDEP’s comment, CDG 244, are associated with a split sample. The two split samples collected from this location at 0.0 to 0.5 feet bgs are designated BC-CDG-244-AA-AB (lab sample number 200-9272-2, PCB concentration 38,000 mg/kg) and CDG-244-AA-AB-0 (lab sample number 460-36678-1, PCB concentration 5,900 mg/kg). The sample with the “BC-” prefix was collected for analysis by Brown & Caldwell on behalf of EPEC. The other sample was collected for analysis by Weston. The Notes on the figures included in **Attachment 5** have been revised to clarify that multiple results for a given sample interval reflect either split samples or samples collected on different dates.

**Comment 5k:** EPEC AOC4 – conclusions regarding this area of AOC 25 (p. 2-72) are unclear and should be described in more detail. For example, are Site-related PCBs and/or BEHP present in this area; is the NAPL related to the heavy sheen in Channels B and C (described on p. 2-51)? This area was not labeled on sample concentration maps, therefore contaminant concentrations in this AOC could not be discerned.

**Response to Comment 5k:** *EPEC AOC4.* No Hatco site-related contamination is present at EPEC AOC4. There is no link between Hatco and EPEC AOC4. This finding was previously reported to NJDEP (See RIR Appendix 66).

**Comment 6:** (p. 8-1) – 8.0 *Sitewide Technical Overview and Conclusions* - The RIR is not complete in that, pursuant to N.J.A.C. 4.9(a)6.ii.(2) and the June 2013 SRP Policy Statement *Interpretation of SRRA Requirement to Complete Remedial Investigation by May 2014*, the RIR should conclude with a determination of whether a remedial action is planned or required for the offsite AOCs/ESNRS, including AOC 21B, Sling Tail Creek; AOC 24, Woodbridge Pond; AOC 25, Channel D; Crows Mill Creek; and the Raritan River. (ETRA notes the RIR (p. 2-56) states that additional remediation is proposed in AOC 23, Channel A, B, C confluence area.) This RIR should clearly state that the USEPA-directed PCB remediation goal of 1 mg/kg will be achieved in all off-site soil and sediment. For other contaminants exceeding ecological screening criteria (ESC), either an ecological risk assessment (ERA) should be conducted to generate site-specific risk-based remediation goals, or remediation to the ESC is required, in accordance with N.J.A.C.7:26E-4.8 and the EETG.

**Response to Comment 6:** The RIR postdates the NJDEP-approved RAWP and applicable addenda. The RIR was provided solely to comply with the NJDEP statutory timeframe requirements under Site Remediation Reform Act (SRRA). It is not intended to replace or change the previously approved RAWP. The RIR text will be updated to include a clear conclusion regarding whether additional remediation is required for AOCs not included in the prior NJDEP-approved RAWP documents. Specific areas addressed include:

- Slingtail Creek: Additional investigation / remediation is not required based on existing sediment sampling data.
- Woodbridge Pond: Additional remediation is required. Weston is currently working with stakeholders to determine the extent of remediation. The sediment remediation goal of 1 mg/kg for PCBs will be achieved for Woodbridge Pond. The planned remedial action, including a site-specific sediment remediation goal for BEHP, will be described in RAWP Addendum 4.
- Channel D (AOC-25): Additional remediation is required to address PCB and BEHP contamination identified in soil and sediment in this AOC.
- Crows Mill Creek: RI data indicate that additional remediation is required in the Channel D area and in that portion of the manmade channels referenced as Crows Mill Creek where sediment with BEHP and PCB concentrations in excess of standards or screening levels.
- Raritan River: The analytical results show that contamination from the Hatco site has not migrated to the Raritan River; therefore, no requirement for Hatco to investigate or remediate the Raritan River has been triggered.

**Comment 7a:** Section 5.3 (title unknown) and Table 4.3-1 are missing from the RIR and purportedly contain information on regulatory standards and screening criteria. This non-existent information is referred to throughout the document (for example, pp. 2-53 and 7-14). Moreover, they are not listed in the Table of Contents. This key information on contaminant benchmarks used

for contaminant evaluation, delineation, and remediation goals is fundamental to the RIR and this section should be provided by the LSRP.

**Response to Comment 7a:** The typographical error reference to section 5.3 has been corrected to Section 4.3, which is the discussion of regulatory standards. Table 4.3-1 was inadvertently omitted and is included in **Attachment 1**.

**Comment 7b:** Similarly, “Figure 57” is referenced on p. 2-68, but is missing from the RIR and not listed in the Table of Contents.

**Response to Comment 7b:** There is no Figure 57. The typographical error will be corrected to read “Figure 2.3.33-1.”

**Comment 7c:** Typographical errors - odd error messages were in the RIR text, for example on pp. 7-1 and 7-11. These should be corrected or removed.

**Response to Comment 7c:** The error messages were incorrect and will be removed from the RIR text.

**Comment 7d:** In Table 2.3.33-1, the NJSWQS for total PCBs is incorrectly stated as 0.00064 ug/l; in fact, the human health-based standard is 0.000064 ug/l. Please correct and check other tables and text. The RIR text should note that the analytical detection limits for PCBs exceeded the NJSWQS.

**Response to Comment 7d:** References to the PCB NJSWQS will be corrected to 0.000064 ug/L as needed and a footnote added to surface water samples with Reporting Limits (RLs) above that value.

We trust that these comments are responsive. Weston also requests the opportunity to meet with the Department to discuss our responses. A revised RIR submittal will be provided after resolution of any outstanding comments.

Sincerely,



Mark D. Fisher, LSRP  
The ELM Group

#### **Attachments**

- 1 – Table 4.3-1
- 2 – Hatco Letter, dated August 21, 1968
- 3 – EPEC Supplemental RIR Volume 1 (electronic file)
- 4 – Figure 1, Proposed Soil and Sediment Sampling Locations



- 5 – Revised PCB Figures, Channel D
- 6 – Revised BEHP Figures, Channel D

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